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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,932	07/30/2003	Takeshi Kamikawa	299002051701	9642

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EXAMINER

SHENG, TOM V

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/631,932	Applicant(s) KAMIKAWA ET AL.	
	Examiner Tom V. Sheng	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 15-17 is/are allowed.
- 6) ☒ Claim(s) 7-11, 13 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 12, 14, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 7-11, 13 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Lebens et al. (US 6,095,661; hereinafter Lebens).

As for claim 7, Lebens et al. teaches a method for driving a light emitting apparatus comprising the steps of;

providing the light emitting apparatus (circuit 700; fig. 7; column 12, lines 5-24) including a light emitting section (LEDs 751) for emitting light (wavelength adjustable from 440 nm blue to 380 nm ultraviolet),

the light emitting section being an LED device (LEDs 751) and a fluorescent excited by the light emitted by the LED device (YAG phosphor that converts a portion of the blue light to yellow; column 9 lines 39-42), a color of the light of the LED device being blue shifted with a change in value of a driving current (the LEDs 751 could be a blue-shifting type made from GaN or InGaN by pulses of sufficiently high current; column 6, lines 37-44),

supplying a pulse current to the light emitting apparatus to drive the light emitting apparatus (the current value of transistor 755 is controlled by current control output of circuit 730), and

controlling separately the peak value (i.e. the height of each pulse; column 12 lines 5-9) and the duty ratio (directly related to the pulse width from control circuit 730 to transistor 750; column 12 lines 9-14) of the pulse current. That is, Lebens teaches the control of color by the driving current and the control of intensity by the pulse width or pulse frequency. See also fig. 6 and column 11, line 52 through column 12, line 4 regarding the blue shift phenomenon.

Apparatus claim 18 corresponds to method claim 7 with the additional limitation of "a plurality of light emitting apparatus which are disposed so as to form a shape of a plane", which is taught by Lebens as a plurality of LEDs arranged in a plane as shown in fig. 1; column 7 lines 17-29).

As for claims 8 and 19, Lebens' teaching of current control from control circuit 730 corresponds to claimed control of color of light emitting by changing the peak value of the pulse current.

As for claims 9 and 20, Lebens' current control and pulse control correspond to claimed control of color of light and intensity of the light, respectively.

As for claim 10, shift range of 6 nm is within the operable range of (440 - 380) or 60 nm.

As for claim 11, Lebens teaches maintaining a constant intensity even as the pulse height is adjusted to change color (column 12, lines 5-14).

Claim 13 correspond to the claim 1 with the additional limitation of a fluorescent material excited by light emitted by the LED device. On this, Lebens further teaches the use of a white LED by utilizing a blue LED with a YAG phosphor that converts a portion

Art Unit: 2629

of the blue light to yellow, thus yielding a white-appearing light output (column 9, lines 39-42).

Allowable Subject Matter

2. Claims 1-5 and 15-17 are allowed.
3. Claims 12, 14, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. The following is a statement of reasons for the indication of allowable subject matter: none of the prior arts of record teaches the limitations "wherein the pulse current has a period equal to or less than 30ms and a pulse width equal to or larger than 0.2ns" of claims 1, 14, 15, 21, 22, and "wherein, if a value of the driving current is changed, the variation of a color of light emitting from the light emitting section is larger than that of a color of light emitting from the LED device" of claim 12.

Response to Arguments

5. Applicant's arguments filed on 2/15/2006 have been fully considered but they are not persuasive. The Applicant argued that no particular embodiment in Lebens teaches utilizing an LED and a phosphor or fluorescent material in which the peak value and the duty ratio of a pulse current supplied to the LED are separately controlled. The Examiner disagrees as though all the elements of claims 7 and 18 are taught appearing in different embodiments however it is inherent that the "white" LED (having both blue-

Art Unit: 2629

shifting LED and a YAG phosphor) becomes a color changeable lighting unit using the separate peak current and duty cycle controls. Moreover, Lebens discloses that the illustrated embodiments are for illustration purpose and many other embodiments will be apparent to those of skill in the art (column 15 lines 35-41).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
May 1, 2006

AMR A. AWAD
PRIMARY EXAMINER
